

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (currently amended) A method of dynamically shortening
2 error correction codewords in an error correction code interleaving arrangement that
3 divides error correction codewords into segments for recording across a ~~codeword~~
4 matrix, the method comprising:
5 defining a matrix wherein the matrix comprises user data and error
6 correction codewords;
7 receiving user data for recording on a storage medium;
8 determining the size of the received user data and the amount of the
9 matrix that will be filled by the received user data; and
10 recording error correction codewords segments in an interleave
11 dynamically created to correspond only to the portion of the matrix filled by the user
12 data.

1 2. (currently amended) The method of claim 1 wherein the user
2 data is partitioned for recording onto the recording medium in a plurality of tracks,
3 and each error correction codeword segment of a ~~codeword~~ is recorded on a separate
4 track.

1 3. (currently amended) The method of claim 1 wherein the
2 matrix includes a predetermined number of partitions each dimensioned to hold a
3 predetermined number of bytes of user data, ~~and determining the amount of matrix~~
4 ~~that will be filled comprises determining the number of partitions filled by the user~~
5 data.

1 4. (currently amended) The method of claim 3 wherein if the
2 user data does not fill all the partitions, shortening the error correction codewords

3 to provide an interleave of the error correction codeword segments corresponding
4 to the number of partitions filed by the user data.

1 5. (currently amended) The method of claim 1 further
2 comprising:
3 reading the data from the storage medium;
4 determining [[that]] when the data only fills a portion of the matrix;
5 and
6 automatically recreating the error correction codewords as a function
7 of the dynamically created interleave recorded on the medium.

1 6. (original) The method of claim 5 wherein reading the data
2 from the storage medium comprises determining the shortening value of error
3 codewords corresponding the partial data fill.

1 7. (currently amended) A system for dynamically shortening
2 error correction codewords used in an error correction code interleaving comprising:
3 a data buffer for receiving user data, the data buffer including a
4 processing arrangement for determining the amount of data received in the data
5 buffer;
6 an error correction code write buffer connected to the data buffer for
7 receiving the user data as well as an indication of the amount of data, the write
8 buffer including a processing arrangement for dynamically determining a shortening
9 value for error correction codewords that correspond to the amount of user data, and
10 recording the user data and error correction ~~codewords~~ codeword segments
11 dynamically in an interleave created to correspond only to the portion of the matrix
12 filled by the user data on a recording medium.

1 8. (original) The system of claim 7 wherein the write buffer
2 processing arrangement is further arranged to divide each of the determined number

3 of error correction codewords into a plurality of segments, and each segment is
4 recorded on a different track.

1 9. (original) The system of claim 7 wherein the write buffer
2 processing arrangement is further arranged to process the user data into a
3 predetermined number of partitions each dimensioned to hold a predetermined
4 number of bytes of user data, and only partitions corresponding to the amount of
5 user data are filled.

1 10. (original) The system of claim 7 wherein the write buffer
2 processing arrangement is further arranged to determine an amount of an error
3 correction codeword matrix that will be filled by the received user data, the
4 shortening size of the error correction codewords is determined to correspond only
5 to the portion of the matrix filled by the user data.

1 11. (original) The system of claim 7 further comprising:
2 an error correction read buffer having a processing arrangement for
3 reading the data from the storage medium, and determining that the data only fills
4 a portion of an error correction codeword matrix, wherein the read buffer processing
5 arrangement automatically determines the shortening value of the error correction
6 codewords corresponding the partial data fill.

1 12. (new) The method of claim 1 wherein determining the amount
2 of matrix that will be filled by the received user data comprises determining the
3 number of partitions filled by the user data.